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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,633	10/17/2003	Tatsuji Higuchi	981491A	8920

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WASHINGTON, DC 20036

EXAMINER
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HENN, TIMOTHY J

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/686,633

Applicant(s)

HIGUCHI ET AL.

Examiner

Timothy J. Henn

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1, 4-8 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohyoshi.

#### **[claim 1]**

Referring to claim 1, Ohyoshi discloses an electronic image pickup apparatus in figure 7, comprising a taking lens unit comprising a plurality of lens 28a, 28b and 23, an image pickup device 21, a recording means being a memory card not shown in figure 7 for recording the image captured by the image pickup device 21 mounted on a circuit board 22, and an optical axis alteration means 29 disposed in between the taking lenses 28a and 28b for altering the direction of the optical axis and said taking lens unit disposed in front on the object side of an image display section 5 for displaying an

Art Unit: 2622

image located on a back surface of the apparatus body. Ohyoshi discloses a lens unit section which includes a rotating section 27 and a fixed section 20. As can be seen from figures 1-6 the rotating section is disposed on the side of the camera while the fixed section 20 is located within the main camera housing 2. Figure 4 further shows that the display 5 is disposed on the rear section of the camera housing 2, therefore the lens unit would necessarily be disposed in front of the display unit as claimed.

**[claim 4]**

Referring to claim 4, Ohyoshi discloses a taking lens unit being plumb in posture to an image pickup device 21 mounted on a circuit board 22 disposed at the bottom of the apparatus body at the time of a customary taking of an image shown in figure 7.

**[claim 5]**

Referring to claim 5, Ohyoshi discloses an electronic circuit board 22 for mounting the image pickup device 21 for processing the image captured by the pickup device where the circuit board 21 is located between the image pickup device and the bottom surface of the apparatus body 22 as shown in figure 7.

**[claim 6]**

Referring to claim 6, Ohyoshi discloses a taking lens unit in figure 7 disposed in the apparatus body such that the optical axis to be altered by the optical axis altering means 29 is horizontal to the apparatus body at the customary time of image taking.

**[claims 7 and 8]**

Referring to claims 7 and 8, Ohyoshi discloses display unit 5 which displays images output by the image pickup device 21 as described in column 6, line 39 - column 7, line

Art Unit: 2622

7. Since the image pickup device is mounted on a circuit board 22 and outputs image data to display unit 5, the circuit board must inherently be "between" the taking lens unit which initially receives the signal and the display device which displays the received signal. The examiner notes that claim 7 does not require the circuit to be physically "between" and therefore Ohyoshi meets the limitations of claim 7 since the circuit board of Ohyoshi is "between" the require elements in an processing flow sense.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyoshi in view of Wakabayashi.

**[claim 9]**

Referring to claim 9, Ohyoshi discloses a protrusion 27d surrounding the taking lens in figure 7 but the protrusion of Ohyoshi does not protrude beyond the peak of the central part of the lens to provide a means for shielding the lens from unwanted light.

However, Wakabayashi discloses a taking lens 11 disposed in a recess surrounded by the protruding edges of the camera body on three sides, and the protruding edge of the lens cover 10 on the remaining side. Having such a configuration

Art Unit: 2622

would result in a hood around the lens cutting unwanted external light in the vicinity of the taking lens. Therefore it would have been obvious to position the taking lens of Ohyoshi in such a manner that the protruding sides of the camera body would extend beyond the taking lens shielding it from unwanted light reducing lens flare. Also refer to the rejection of claim 1.

**[claim 10]**

Referring to claim 10, Ohyoshi discloses a protrusion 27d surrounding the taking lens in figure 7 but does not disclose that the protrusion comprises an edge portion of a lens cover that is displaceable between a position for concealing the lens and a position for opening the same.

However, this feature is well known as taught by Wakabayashi. Figure 3 of Wakabayashi shows an image taking lens 11 and an edge portion of a lens cover 10 disposed in front of the image taking lens for opening as shown in figure 3 and for concealing the lens as shown in figure 6 to protect it. Therefore it would have been obvious to provide the lens cover of Wakabayashi with the image capture system of Ohyoshi to provide protection for the lens from scratches and other damages but also because the protruding edge of the cover would provide shielding from unwanted light around the taking lens reducing the effects of lens flare.

**[claim 11]**

Referring to claim 11, Ohyoshi discloses a protrusion 27d surrounding the taking lens in figure 7 but does not disclose that the protrusion comprises an edge portion of a lens cover that is displaceable between a position for concealing the lens and a position

for opening the same.

However, this feature is well known as taught by Wakabayashi. Figure 3 of Wakabayashi shows an image taking lens 11 and an edge portion of a lens cover 10 disposed in front of the image taking lens for opening as shown in figure 3 and for concealing the lens as shown in figure 6 to protect it. Therefore it would have been obvious to provide the lens cover of Wakabayashi with the image capture system of Ohyoshi to provide protection for the lens from scratches and other damages but also because the protruding edge of the cover would provide shielding from unwanted light around the taking lens reducing the effects of lens flare.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyoshi in view of Kikuchi.

**[claim 13]**

Referring to claim 13, Ohyoshi discloses an image sensor 21 mounted to a circuit board 22 attached to the base of the camera body. Ohyoshi does not disclose a means of moving the image sensor along the optical axis. However, Kikuchi discloses that moving an image sensor along an optical axis using a linear motor is a well known method of auto focus (Col. 13, Lines 60-67). Therefore it would have been obvious to provide a means of moving the image sensor of Ohyoshi along the optical axis as taught by Kikuchi to properly focus the image incident upon the sensor. Also refer to the rejection of claim 1.

Art Unit: 2622

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyoshi.

**[claim 14]**

Referring to claim 14, Ohyoshi does not specifically disclose that the reflecting mirror 29 in figure 7 has an IR cut film vapor deposited on the reflective surface.

However, Official Notice is taken that using IR cut films on optical elements in an electronic image capture system is well known because infrared light can damage sensitive components of the image sensor. Therefore it would have been obvious to provide the IR cut film on the mirror because installing an extra optical element with R filtering properties would increase the overall size of the optical system, which is not desirable in a compact camera.

8. Claims 2, 3, 12, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyoshi in view of Orbach et al.

**[claim 2]**

Referring to claim 2, Ohyoshi discloses a hole 25a to adjust quantity of light passing through the taking lens unit provided between the optical axis alteration means 29 and the image pickup unit 21. The hole 25a of Ohyoshi does not mechanically adjust the quantity of light; instead it only permits a fixed quantity of light to pass through. However, a mechanical iris is well known as taught by Orbach. Figure 3 of Orbach shows an iris 38 whose size is mechanically adjusted by the motor 42 disposed on the side of the optical system (Col. 3, Lines 51-68). The iris of Orbach is used to control the amount of object light passed through to the image sensor. Therefore it would have



Art Unit: 2622

been obvious to provide a means of adjusting the quantity of light provided to the image sensor to insure a properly captured image with the correct amount of brightness. Also refer to the rejection of claim 1.

**[claim 3]**

Referring to claim 3, Ohyoshi discloses a fixed focus lens system 23 and does not provide a lens displacing mechanism for displaying a focus lens in the direction of the optical axis between the optical axis alteration means and the image pickup device.

However, Orbach discloses a focus lens 44 located in between an optical axis alteration means 24 and an image pickup device 32. The focus lens 44 is manually moved along the optical axis guided by a pin 70 to an in focus position when the user operated a focus button 50 (Col. 4, Lines 1-13). Therefore it would have been obvious to provide the drive source and focus system of Orbach with the compact optical system of Ohyoshi to provide a means of properly focusing an image to be captured. Also refer to the rejection of claim 1.

**[claim 12]**

Referring to claim 12, Ohyoshi discloses a focusing lens system but does not disclose a displacing mechanism on the lateral side of the taking lens unit for moving the focus lens to a point where the object image is in focus. However, Orbach discloses a driving source disposed on the lateral side of a taking lens 12 in figure 3 being a guide pin 70 and operation button 50 for moving a focus lens 44 to an in focus position when the user operates the coupling button 50 (Col. 4, Lines 1-13).

**[claim 15]**

Referring to claim 15, Ohyoshi does not disclose that the optical axis alteration means is a beam splitter for reflecting object light from the taking lens to an image pickup element and allowing object light to pass through to an optical viewfinder.

However, Orbach shows an image capture configuration in figure 3 having a taking lens unit 12 opposing an optical viewfinding window 28 where object light is passed straight through a beam splitter 24 directly to the viewers eye. Therefore it would have been obvious to provide the optical viewfinder of Orbach with the image capture system of Ohyoshi and to replace the mirror 29 of Ohyoshi with the beam splitter 24 of Orbach to allow object light to pass straight from the image taking lens to the viewer's eye along with reflecting light to the image pickup unit because optical viewfinder systems require no power to operate and would save battery power opposed to an LCD giving the camera a longer operation time. Also refer to the rejection of claim 1.

**[claim 16]**

Referring to claim 16, Ohyoshi does not disclose that the optical axis alteration means is a beam splitter for reflecting object light from the taking lens to an image pickup element and allowing object light to pass through to an optical viewfinder.

However, Orbach shows an image capture configuration in figure 3 having a taking lens unit 12 opposing an optical viewfinding window 28 where object light is passed straight through a beam splitter 24 directly to the viewers eye. Therefore it would have been obvious to provide the optical viewfinder of Orbach with the image capture system of Ohyoshi and to replace the mirror 29 of Ohyoshi with the beam splitter 24 of Orbach to allow object light to pass straight from the image taking lens to the viewer's

Art Unit: 2622

eye along with reflecting light to the image pickup unit because optical viewfinder systems require no power to operate and would save battery power opposed to an LCD giving the camera a longer operation time. Also refer to the rejection of claim 6.

**[claim 17]**

Referring to claim 17, Ohyoshi discloses an optical axis alteration means 29 that is rotatable between a first position directing object light from an image taking lens 28a to an image pickup device mounted on circuit board 21 and a second position but does not disclose that the second position is retracting itself from the path of object light from the image taking lens 28a allowing object light to pass through to an optical viewfinder. In addition, Ohyoshi does not disclose an optical viewfinder disposed on the opposite side of the camera body opposing a taking lens.

However, Orbach shows an image capture configuration in figure 3 having a taking lens unit 12 opposing an optical viewfinding window 28 where object light is passed straight through a beam splitter 24 directly to the viewer's eye. Therefore it would have been obvious to provide the optical viewfinder of Orbach with the image capture system of Ohyoshi and to modify the second rotatable position of Ohyoshi to allow object light to pass straight from the image taking lens to the viewer's eye because optical viewfinder systems require no power to operate and would save battery power giving the camera a longer operation time. Also refer to the rejection of claim 1.

**[claim 18]**

Referring to claim 18, Ohyoshi discloses an optical axis alteration means 29 that is rotatable between a first position directing object light from an image taking lens 28a

Art Unit: 2622

to an image pickup device mounted on circuit board 21 and a second position but does not disclose that the second position is retracting itself from the path of object light from the image taking lens 28a allowing object light to pass through to an optical viewfinder. In addition, Ohyoshi does not disclose an optical viewfinder disposed on the opposite side of the camera body opposing a taking lens.

However, Orbach shows an image capture configuration in figure 3 having a taking lens unit 12 opposing an optical viewfinding window 28 where object light is passed straight through a beam splitter 24 directly to the viewer's eye. Therefore it would have been obvious to provide the optical viewfinder of Orbach with the image capture system of Ohyoshi and to modify the second rotatable position of Ohyoshi to allow object light to pass straight from the image taking lens to the viewer's eye because optical viewfinder systems require no power to operate and would save battery power giving the camera a longer operation time. Also refer to the rejection of claim 6.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- |      |                |              |
|------|----------------|--------------|
| i.   | Higuchi et al. | US 6,778,218 |
| ii.  | Scherling      | US 6,850,279 |
| iii. | Abe et al.     | US 7,092,030 |
| iv.  | H              |              |

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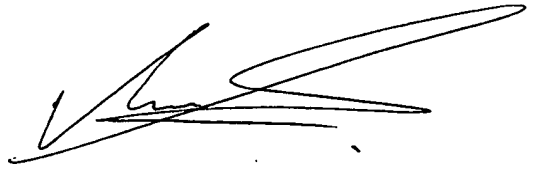
a et al. US 6,041,195  
v. Sawanobori et al. US 5,963,668

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJH  
12/20/2006



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